tract infection (UTI) following urodynamic evaluation in patients whom bladder emptying is performed with clean intermittent catheterization (CIC) and who do not receive antibiotic prophylaxis treatment.

Patients and methods.– This was a prospective study, conducted at the Centre de l'Arche on 100 patients on CIC who had a urodynamic evaluation without antibiotic prophylaxis. Patients with cognitive impairment and patients with known vesicoureteral reflux were excluded from this study. All patients were recalled 8 days following the urodynamic evaluation to assess whether they presented UTI symptoms (spasticity, incontinence, cloudy urine, fever. . .).

Results.– One hundred patients (63 males, 37 females) with the mean age of 41.4 years (range, 11–81 years) were included in this study. Fifty-six paraplegic, 13 tetraplegic, 11 spina bifida, 9 multiple sclerosis, 11 another etiology.

Ninety-seven patients were self-catheterized, including 2 with continent cystostomy, 1 was hetero catheterized, and 2 were both self- and hetero-catheterized. Two patients were lost to follow-up. Of the 98 patients who were available for follow-up assessment:

– 87 patients had no signs of infection;

– 8 patients reported one or 2 clinical signs of infections, very mild to mild in intensity. All clinical signs resolved within 48 hours, either spontaneously or following increased water intake. Only one of these patients had a 3-h fever episode 7 days after examination, which resolved spontaneously;

– One patient self treated with a 3-day course of antibiotics, upon occurrence of increased spasticity and foul smelling urine;

– One patient was prescribed antibiotic treatment following high fever and cloudy and hematuric urine 5 days after examination and one patient had antibiotic treatment following signs of infection without fever 7 days after examination.

Discussion.– We report a very low incidence of urinary tract infection that required antibiotic treatment, in these CIC patients not receiving antibiotic prophylaxis for urodynamic evaluation.

Since this study, we did not change our usual practice.

We did not find clear recommendations in our literature search.

This study is a first step that could be completed by a large, multicenter study to confirm our findings.

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Is it possible to replace the 24-hour creatinine clearance by easier methods to assess the renal function of patients with neurogenic bladder?

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Keywords: Neurogenic bladder; Renal function; Renal failure

Purpose.– Renal impairment has, for a long time, been one of the first causes of death in spinal cord injured patients. The recommended method for assessing renal function in common practice is the 24-hour creatinine clearance (Cl24H), which is a highly tedious exam due to the difficulties found in the urinary collection process. This gives rise to an interest in investigating alternative methods. Can the more practical methods available in common practice such as, the Cockcroft or MDRD-4 equations or ultrasound, be used in patients with partial neurological deficiencies?

Patients and methods.– A renal assessment was performed on 121 patients with varying neurological diseases (multiple sclerosis, spinal cord injury, Parkinson's disease. . .) during their medical follow-up through the 24-hour urinary creatinine clearance (Cl24H), an estimation of the creatinine clearance according to the Cockcroft-Gault and MDRD-4 equations and a renal ultrasound. Their level of mobility was taken into account.

Results.– The Pearson's correlation coefficient between Cl24 h and creatinine clearance estimated by the Cockcroft-Gault and MDRD-4 equations was low (respectively 0.549 and 0.381). The sensitivity and the negative predictive value of an abnormal renal ultrasound used in the screening of renal dysfunction were respectively of 13.7% and 56%.

Conclusion.– Regardless of the mobility level involved, the Cl24H could not be replaced by the Cockcroft-Gault or MDRD-4 equations or a renal ultrasound in patients with neurogenic bladder disorders.

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Anticholinergics in overactive bladder and detrusor overactvity of spinal cord injury

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Keywords: Neurologic bladder; Spinal cord injury; Anticholinergics; Detrusor overactivity; Urodynamics

Goal.– To evaluate clinical and urodynamic effects of anticholinergics in the treatment of overactive bladder and/or detrusor overactivity of spinal cord injury (SCI).

Patients and methods.– Our retrospective study involved 231 SCI patients, between January 2007 and November 2009, treated with anticholinergics (trospuim, oxybutynin) in combination with clean intermittent catheterization. Each patient underwent a clinical evaluation and urodynamic before and after anticholinergics. Our standard of clinical balance was no leakage between the catheterization (continence). The urodynamic evaluation included the maximum bladder capacity (BCMax) and amplitude of involuntary detrusor contractions (IDC). A BCMax exceeding 400 mL and an amplitude's IDC less than 20 cmH_2O sign balance urodynamics.

Results.– The average age of our population was 36.46 years with male predominance of 84.41% (195). 75 patients (32.24%) were clinically balanced including 25 (33.33%) with persistent detrusor overactivity. No CDI in 44 patients among 75 (58.66%). In contrast, 156 patients (67.53%) exhibited clinical - urodynamic imbalance including 83 (53.20%) with CDI above 40 cmH20 and/or BCMax of 252 mL on average.

Discussion/conclusion.– The imbalance of clinical neurologic bladders of SCI, although appearing as responsible for social disability, often conceals a urodynamic imbalance which can be deleterious in the short, medium and long term compromising the functional vesicorenal or even vital outcome. The literature data underline the importance of anticholinergics often limited by frequent side effects, dependent or not on the dosage and/or route of administration. Our study suggests that the clinical effects of oral anticholinergic drugs, usually used as first line treatment in this indication, must be controlled with urodynamic testing, the only true predictor of prognosis.

References

[1] Amend B, Hennenlotter J, Schäfer T, Horstmann M, Stenzl A, Sievert KD. Effective treatment of neurogenic detrusor dysfunction by combined high-dosed antimuscarinics without increased side-effects. Eur Urol 2008;53(5):1021–8. Epub 2008 Jan 17.

[2] Kennelly MJ, Lemack GE, Foote JE, Trop CS. Efficacy and safety of oxybutynin transdermal system in spinal cord injury patients with neurogenic detrusor overactivity and incontinence: an open-label, dose-titration study. Urology. 2009;74(4):741–5. Epub 2009 Jul 22.

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200/300 IU intradetrusor botulinum injections

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Keywords: Neurologic bladder; Detrusor botulinum toxin; Detrusor overactivity; Urodynamics

Goals/Objectives.– Evaluate the clinical and urodynamic effectiveness of 200 IU versus 300 IU intradetrusor injections of BOTOX.
Patients and methods.– Our prospective study involved 40 SCI patients between 2008–2010, with detrusor overactivity refractory to anticholinergics, achieving clean intemittent catheterization (ASI/HSI) Before injection, all patients had a clinical assessment: ability functional bladder (AFB), leakage between the catheterization and urodynamics evaluation: Maximum capacity bladder (BCMax) and amplitudes of involuntary detrusor contractions (IDC). The evaluation was done after 6 weeks. The injections were made with 200 IU Botox diluted in 30 mL in 30 points.
Results.– Our population was predominantly male (28 men and 12 women). 87.5% are continent for 9 months on average. Two groups of BM:
– Group 1 (G1): 21 SCI were injected with 200 IU Botox. 18 (85.71%) were continent for 9.3 months on average. The AFB increased (286–595 mL). The BCMax increased (336–480 mL). The amplitudes of the IDC all decreased with 11 SCI (52.38%) with zero IDC.
The re-injection of 200 IU Botox (1 to 3) in 11 patients confirmed the duration of efficacy.
– Group 2 (G2): 19 SCI had Botox injections 300 IU (1–6) then Botox 200 IU (1–3). 17 patients (89.47%) were continent with 300 IU and 200 IU respectively for 8.8 months and 9.3 months. Re-injection of 300 IU and 200 IU respectively in 10 and 12 SCI confirmed the holdover. The increase in AFB and BCMax was identical for the 2 doses and the lower amplitudes of IDC.
Discussion/conclusion.– The multicenter randomized placebo controlled trial of Botox injection 200 or 300 IU conducted in neurological patients revealed an identical efficiency for two doses of Botox. Our prospective study showed efficacy, duration of action identical for 200 IU or 300 IU Botox and a reproducibility of clinical and urodynamic results.
References
B. Schurch and al. Botulinum toxin type A. Treatment for neurogenic urinary incontinence J Urol 2005.

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Assessment of sexual function and orgasmic capacity of women with spinal cord injury

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Keywords: Orgasm; Vibrostimulation; Spinal cord injury; Midodrine

Following our previous studies on men, we have adapted our clinical protocol to assess the remaining sexual function of women with spinal cord injury (SCI). Our protocol involves an assessment of perineal sensitivity to help women acquiring a new mental image of their genitals, followed by an assessment of their sexual responses to natural stimulation, or vibrostimulation or vibrostimulation combined with midodrine (5–20 mg). The results show that perineal assessment helps 85% of the patients and that 79% can reach orgasm with various forms of stimulation. Blood pressure changes during stimulation to orgasm showed that systolic blood pressure varied from 91 mmHg at baseline to 145 mmHg at orgasm to 103 mmHg at the end of the test. Diastolic blood pressure varied from 49 mmHg at baseline to 82 mmHg at orgasm to 68 mmHg at the end of the test, and heart rate from 68bat/min to 75bat/min to 72bat/min. The sensations described included 6.4 cardiovascular responses perceived at orgasm compared with 2.6 during sexual stimulation without orgasm, 11.4 muscular contractions perceived at orgasm compared with 7 without orgasm, 10 autonomic responses perceived at orgasm compared with 2.6 without orgasm and 1.4 dysreflexic responses perceived at orgasm compared with 0.6 without orgasm. The data are similar to those from men with SCI and validate the neurophysiological model of sexual function in patients with SCI *(Funded by GENULF).*
References
– Courtois et al. Perceived physiological and orgasmic sensations at ejaculation in spinal cord injured men. J Sex Med 2008;5(10);2419–2430.
– Alexander M, Rosen RC. Spinal cord injuries and orgasm: a review. J Sex Marital Ther 2008;34(4):308–24.
– Sipski LM, Alexander CJ, Rosen R. Sexual arousal and orgasm in women: effects of spinal cord injury. Ann Neurol 2001;49:35–44.
– Whipple B, Komisaruk BR. Brain (PETG) responses to vaginal-cervical self-stimulation in women with complete spinal cord injury: preliminary findings. J Sex Marital Ther 2002;28:79–86.

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Ejaculation with penile vibratory stimulation: 202 spinal cord injury patients

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Keywords: Penile vibratory stimulation; Spinal cord injury; Ejaculation

Introduction.– The aim of our prospective study was to evaluate the prevalence of ejaculation in SCI patients by penile vibratory stimulation, depending on level of injury, the Asia score, pharmacological treatment, voiding mode and disease duration since injury.
Patients and methods.– Our study focused on 202 SCI patients hospitalized from January 2007 to 2009 all with anejaculation. All patients underwent a neurological evaluation, an Asia score, a collection of pharmacological treatments associated with their voiding mode. They all had one or more vibratory sessions with sperm collection and systematic search of sperm in the urine.
Results.– 202 hospitalized SCI patients: 87 cervical lesions, 87 thoracic lesions and 28 lumbosacral lesions. 158 have an Asia score A, 28 a peripheral perineum operation, 125 are making intermittent catheterizations. 99 patients treated with anti-cholinergic and 70 with alpha-blocker treatment. 88 patients had at least 48 months of evolution since trauma and 114 over 60 months (60 to 240 months). 78 patients or 39% achieved an ejaculation by penile vibratory stimulation (31 anterograde, 53 anterograde and retrograde, 17% retrograde). The prevalence of ejaculation triggered by penile vibratory stimulation was better for high spinal cord damage (47% cervical, thoracic 35%, 25% lumbosacral). The results were better for patients with incomplete versus complete lesion (52% versus 35%) and for patients who urinated by percussion versus self-catheterization (50% vs. 33%) (S). The disease duration did not influence ejaculation (NS).
Discussion and conclusion.– Penile vibratory stimulation improves the possibilities of ejaculation for SCI patients. Our results are dependent on the level of the injury, the nature of complete or incomplete lesion, independent of disease duration since trauma, although in the literature, these notions are controversial. Treatments associated with voiding mode seem to play a significant role in ejaculation.
References
–Brackett NL, Ferrell SM, Aballa TC, Amador MJ, Padron OF, Sonksen J, Lynne CM. An analysis of 653 trials of penile vibratory stimulation in men with spinal cord injury. J Urol 1998;159(6):1931–4.

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Sexual disorders in 83 patients with systemic sclerosis

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